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Psychometric validation of the French version of the Coach-Athlete Relationship Questionnaire

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Introduction.

For the past twenty years, the Coach-Athlete Relationship Questionnaire (CART-Q; Jowett & Ntoumanis, 2004) has been considered as an effective measurement tool to explore the coach-athlete relationship (CAR) quality (in terms of closeness, commitment, complementarity, and co-orientation). However, although few studies used a French translation of the CART-Q, these did not focus on evaluating the psychometric properties of this scale. The two present studies aim to contribute to the psychometric validation (i.e., factor structure, discriminant, convergent, criterion validity, and temporal invariance) of a French athlete version of the CART-Q among two different samples.

Method.

In the first study, 442 athletes (Mage = 21.66, SD = 4.82; 34.2% of women) from both individual and team sports competing at different levels completed a French translation of the 11-item CART-Q. For study two, 282 young handball players (Mage = 15.39, SD = 1.01; 41.6% of women) involved in intensive training centers completed at two measurement times (early and mid of the season) a revised 12-item French version of the CART-Q.

Confirmatory factor analysis and structural equation modelling were conducted to explore the psychometric properties of the CART-Q.

Results.

Results of the first study indicate a satisfactory fit of the second-order model ($\chi^2/df = 4.97$; CFI = .90; SRMR = .05), a satisfying convergent validity (factor loadings above 0.63), and a good criterion validity with athletes' perceptions of self-competence ($b = .30$, $p < .001$). In the second study, results also reveal a satisfactory fit of the second-order model ($\chi^2/df = 3.96$; CFI = .90; SRMR = .07), a satisfying convergent validity (factor loadings above 0.55), and a good criterion validity ($b = .34$, $p < .001$). In addition, results provide evidence for the temporal invariance (scalar invariance: $\chi^2 > .05$; delta CFI $< .01$) of the CART-Q over time.

Discussion.

These two studies provide evidence for the psychometric validity of the 12-item French revised version of the CART-Q. In addition, the second study is the first – to our knowledge – to highlight the temporal invariance of the CART-Q. This result suggests that despite the dynamic nature of the CAR (Roux et al., 2022), the factorial structure of the CART-Q remains stable over time. Thus this 12-item French version of the CART-Q can be considered as adapted to measure the CAR quality among French-speaking athletes.

References:

- Jowett, S., & Ntoumanis, N. (2004). The coach-athlete relationship questionnaire: Development and initial validation. *Scandinavian Journal of Medicine & Science in Sports*, 14(4), 245–257.
- Roux, V., Martinent, G., & Trouilloud, D. (2022). Temporal dynamics of the quality of the coach-athlete relationship over one season among adolescent handball players: a latent class analysis approach. *International Journal of Sport and Exercise Psychology*, 1-18.

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